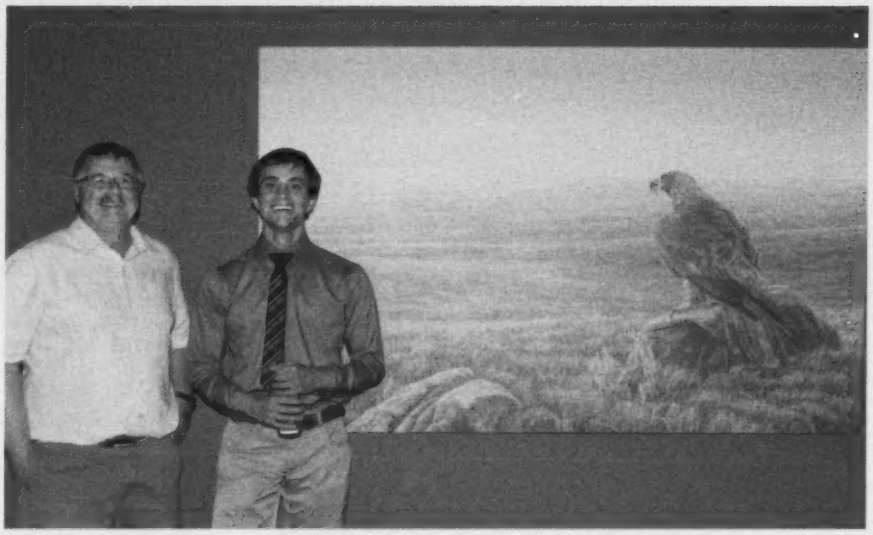
Lakeland College Technologist paints his path to success

by Colleen Symes



When Colin Starkevich started Lakeland College's wildlife and fisheries conservation (WFC) program in the fall of 2008, he had a definite career path in mind.

He wanted to be an artist.

Starkevich's artistic journey began in high school in 2006 when his art teacher Dr. Brenda Savella taught him to paint with oils. A year later he won the national *Get to Know Your Wild Neighbours* art contest. In 2009 he was personally invited by Robert Bateman to attend his weeklong Master Artists Seminar in 2010.

Mr Starkevich enrolled in the WFC program at the Vermilion campus so he could learn more about wildlife and their habitats because he knew that was the subject he wanted to paint. "The program gave me an opportunity to work with wildlife and see them up close in places most people can't access."

After graduating from Lakeland College in 2010, Mr Starkevich transferred his diploma credits to the University of Lethbridge where he completed a bachelor of science in environmental science in 2013. He then moved to the Arctic where he worked for Environment Canada as a wildlife technician in a snow geese breeding colony. Later he did bird surveys for Nature Alberta.

When Mr Starkevich wasn't working, studying or creating bird mounts (he's also an avian taxidermist), he was creating the artwork that would one day help him achieve a goal he had dreamed about since his days as a Lakeland student. During an ornithology class, instructor Chris Olsen encouraged students to visit the Royal Alberta Museum in Edmonton as it has the largest collection of mounted birds in Canada.

While at the museum, Mr Starkevich became inspired by all of the wildlife exhibits featuring paintings and taxidermy and began daydreaming of one day having his own exhibit at the Royal Alberta Museum.

He no longer needs to dream. This year more than 60 of Mr Starkevich's original paintings were on display from May 16 to Sept. 27 in the Royal Alberta Museum's 2,500 sq. ft. feature gallery. *Glimpses of the Grasslands: The Artistic Vision of Colin Starkevich* featured work from *The Grassland Series* that he started planning and creating in 2009 after he visited southern Alberta.

"I really connected with the Grasslands Region and started painting landscapes and wildlife in that setting. It's the work I'm most passionate about," explains Mr Starkevich, who also paints *en plein air* (which is outside surrounded by the landscape he's depicting).

Since the exhibit opened, Mr Starkevich has received accolades about his artwork from family, friends and strangers. "The feedback has been very positive. I know that I want to keep painting and be the best artist I can be."

Some of his pieces from *Glimpses of the Grasslands* will be on display from November until January at CASA (Creating Arts in Southern Alberta) in Lethbridge. That is also the city where the native Edmontonian is living as he returned to the University of Lethbridge to work on his master's and "a project that will start the next chapter of *The Grassland Series*." To learn more about his work visit www.colinandthegrasslandseries.com or www.colinstarkevich.com.

Colleen Symes, the author of this article, is the Director of Marketing and Communications at Lakeland College in Vermillion, Alberta. The article was previously published in the winter 2015 edition of Lakeland College Excel. The accompanying photographs are courtesy of the college.

About this issue's special cover

The painting on our special "wrap" cover is by wildlife technologist Colin Starkevich, titled *A Song of Pride - Western Meadowlark*, acrylic on board (original 24" x 20"). Mr Starkevich is currently enrolled at the University of Lethbridge in pursuit of a Masters degree.

BIOS

ASPB
ALBERTA SOCIETY
OF PROFESSIONAL BIOLOGISTS

Vol 31 No 1
WINTER 2016

Biodiversity meets climate change; how is that going?

PAGE 3

ASPB
ALBERTA SOCIETY
OF PROFESSIONAL BIOLOGISTS

370, 105 - 12th Ave SE
Calgary, AB, T2G 1A1
T: 403.264.1273
E: pbiol@aspb.ab.ca
W: www.aspb.ab.ca

EXECUTIVE:

President
Shaun Toner, P. Biol.

President Elect
Elvie Reinson, P. Biol.

Secretary
Angela Holzapfel, P. Biol.

Past President
Chris Clement, P. Biol.

DIRECTORS:

Sara Bumstead, P. Biol.
Karoliina Munter, P. Biol.
Susan Patey LeDrew, P. Biol.
Gary Ash, P. Biol.

Public Member
David McInnes, ICD.D

ADMINISTRATION

Executive Director
Jennifer Sipkens

Registrar
Sheila Leggett, P. Biol.

Project Coordinator
Jennifer Raffan, BIT

COMMITTEES:

Discipline Chair
Brian Bietz, P. Biol.

Registration Chair
Erin Rooney, P. Biol.

Practice Review Chair
Carol Engstrom, P. Biol.

Awards Chair
Dave Ealey, P. Biol.

Professional Development (Calgary)
Ken Chatel

Professional Development (Edmonton)
Chris Newton, P. Biol.

Mentoring Coordinator
mentoring@aspb.ab.ca

BIOS

is published quarterly by the Alberta Society of Professional Biologists for the benefit of its members and for those interested in the field of professional biology. Opinions published in BIOS do not necessarily reflect the opinions or policy of the Society or its Board of Directors.

Managing Editor:
Jennifer Sipkens

Editor:
Peter G. Kingsmill

Articles or comments are welcomed and should be sent to announcements@aspb.ab.ca

... notes from the E.D.

Professionals, like all Alberta residents, are not immune to changing economic realities and at the ASPB we understand that global factors beyond our control have negatively impacted many – if not most – of our professional members. To say that it's been a tough year for biologists would be an understatement!

We also know it is important to our members that the ASPB continues to forge ahead with our efforts to raise the bar for professional biologists through enhancing and building on the continuing competency program (CCP), better registration practices, and a clearer discipline process. I would especially like to acknowledge the hard work of the Society's Registrar Sheila Leggett, who has been amazing at moving things forward with the Registration Committee. We truly appreciate the work of the committee volunteers, and are pleased to see that membership application numbers do not appear to have slowed down at all, even with the weak economy.

Our Annual Conference in April 2016 is themed to squarely address our current realities: **Turning Uncertainty Into Opportunity: Science and Regulation in Changing Times**. We look forward to having a full slate of high-quality and topical presentations, and we will be announcing our keynote speaker in the near future. And, of course, I never miss an opportunity to beat the drum for our Conference Photo Contest, and for new conference sponsorships!

Our volunteer professional development leaders continue to seek out new and relevant presentations (and I am pleased to note that there is interest in developing some professional development opportunities in Fort McMurray). In response to member interest, we will continue to offer sessions through Adobe Connect whenever the venues are equipped to do so, allowing members anywhere to watch the presentations.

A couple of articles in this Winter edition of **BIOS** reflect our increasing engagement with colleges granting biology-focussed technologist certification (Lakeland College at Vermillion and Lethbridge College). Our special cover wrap in this issue further supports that vision, as well as exemplifying the fact that many technologists (and professionals alike) have so much to offer beyond what we usually expect of our colleagues!

Despite "challenging times" economically, all in all it has been a good year for the ASPB. We will continue to work hard at promoting and building the designation to ensure our Members can be proud of their designation. A most happy and prosperous New Year to all!

Jennifer Sipkens, ASPB Executive Director

Cover Photo
Fisheries Biologist John Derksen, an Instructor at Lethbridge College, checks out an electrofishing unit with students during a class field session. *Photo supplied by Lethbridge College.*

We hear a lot these days about climate change; how are we doing with biodiversity conservation?

by Peter G. Kingsmill

An article in a recent (November 28, 2015) issue of *The Economist*, titled *A modern ark: to save endangered species*, move them to more congenial places, poses that "Conservation is nearly always backward-looking. It aims to keep plants and animals not just where they are but where they were before humans meddled... in a rapidly warming world, this attitude is becoming out-dated. No part of the Earth can be returned to a natural state that prevailed before human interference, because humans are so rapidly changing the climate."

The Economist is arguably not a science publication but it is hardly known for flights of fancy, even if it seems here to be pushing the envelope somewhat. The same article also proposes that the traditional practice of conservation is being overtaken by the reality of global warming and in the future the question will no longer be how to preserve species in particular places, but how to move them around to ensure their survival.

"the only way I see to manage risk of climate change is to implement a large variety of potential solutions..."

Dr Jim Schieck of the Alberta Biodiversity Monitoring Institute points out that climate change is indeed happening, but the consequences are outside of historical experience when it comes to what the effects will be. "Without a clear picture of the effects, choosing solutions is dubious," he says. "The so-called 'pacific blob' is an informative example – it may have been influenced by climate change (no one really knows), but it has definitely had cascading effects on climate in North America. Predicting the next blob (or some other unknown) and the ecological effects, seems like hocus-pocus; the only way I see to manage risk of climate change is to implement a large variety of potential solutions so that regardless of what happens, some of the solutions will help. Translocation is only one of the many potential solutions."

Dan Farr (Director of the Application Centre at the Alberta Biodiversity Monitoring Institute) comments that *The Economist's* statement is not widely accepted in the scientific community. Dr Farr points out that moving species around to ensure their survival is viewed by many scientists and wildlife managers as a viable management and conservation tool, but that it is too expensive and risky to ever implement "for more than a select few socially desirable species (such as those with large dewy eyes and fur)." He continues: "Anyway, the scientific community doesn't really own this question. Scientists can estimate and predict the consequences of translocations, but the species and ecosystems involved aren't their sole responsibility or property. Citizens and landowners (and their government representatives) are the owners."

Protected areas and climate change

Some have speculated that citizens and landowners (society) would soon need to step in and manage our changing natural world before the world's incrementally expanding population makes it impossible to sustain even a semblance of its natural vitality beyond an increasingly degraded handful of protected areas. Are we fighting a losing battle if we limit our response to species conservation (whether flora or fauna) to those protected areas? Dr

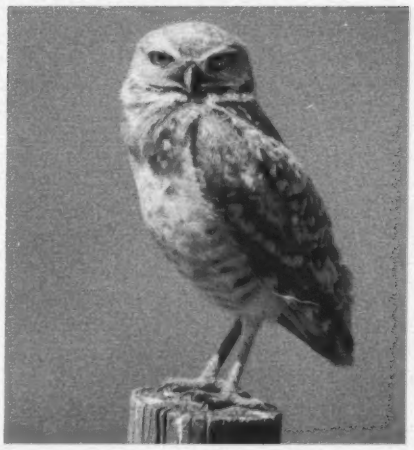


Photo credit: Janet Ng

Farr is quick to respond that, indeed, we have stepped in and managed; the natural world is already altered, and our response to species conservation is not limited to a handful of protected areas: "Protected areas remain a key strategy for conserving species. Climate change alters the environmental conditions inside and outside protected areas, so we can expect species distributions to change accordingly." He also points out that protected areas are refuges in which species, despite climate change, do not have to deal with the other negative aspects of human activity.

British evolutionary biologist Chris Thomas (University of York, UK) is quoted in *The Economist* as estimating that by 2050 between 18% and 35% of species could be on the path to extinction. The article continues: "The notion of deliberately moving species a long way from home is starting to look a little less heretical. The International Union for Conservation of Nature, which shapes biodiversity policy, recently revised its guidelines, apparently giving a slight nod to such relocations. It insists upon great caution." For his part, Dr Thomas worries that "if you have too much risk assessment, nothing will happen, and these species will go extinct."

Continued on page 8

From the Registrar's desk

Sheila Leggett, P. Biol., P. Ag.

Many steps have been taken since my last column to you. An updated Registration Handbook has been approved by the Board and is now publicly available on the website. Board direction to the Registration Committee is documented in the handbook.

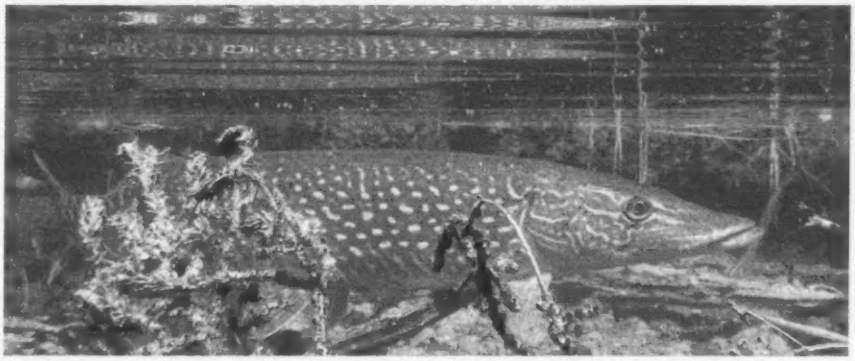
A section of the Handbook is titled "Delegation of Authority and provides Board Direction to our Executive Director as well as direction from the Executive Director to the Registrar and to the Chairs of the Registration and Practice Review Committees. The Handbook also informs applicants about the processes and regulatory framework used by the Registration Committee in its deliberations.

What is the Registration Committee, you ask? It is made up of ASPB members who annually volunteer hundreds of hours reviewing membership applications. Collectively, they decide whether to accept, defer or refuse membership to applicants who apply for P. Biol or BIT registration. The Committee also reviews applications for the following unregulated membership categories: Registered Biologist (R.Biol.), Registered Biologist in Training (RBIT), Registered Technologist in Biology (R.T.Biol.) and Biological Technologist in Training (BTT).

The Registration Committee has met a number of times this fall and, in addition to reviewing applications, has provided wise guidance to the preparation of the new Handbook. In re-drafting the Handbook, we have streamlined the review process; starting in 2016, all reviews will be completed electronically, with the Registrar doing the initial review and presenting recommendations to the Registration Committee. As a result of these changes, the Executive Director will be recruiting a full time employee as Registrar. This is my opportunity to bow out gracefully and let another biologist pick up where the Committee and I, under Jennifer Sipken's direction, have led the organization in this important area. I have agreed to stay on as Registrar until our new Registrar is in place.

I want to take this occasion to note that the Registration Committee has benefited from decades of experience from three senior biologists: Bernd Martens, Carl Warner and Bob Shelast. These individuals have served on the Registration Committee for more than 20 years each, and have decided to retire from the Committee this year. They have served our organization with great dedication, wisdom and integrity.

Bob, Carl, and Bernd, many thanks to each of you from the entire membership of ASPB.



This photo, taken by ASPB Professional Biologist Joyce Evans while snorkeling, is of a northern pike observed in Finlayson Lake, Yukon. "I found a small dead fish while I was swimming in that lake, Ms. Evans notes. "I picked it up and carried it for a bit thinking it would be interesting if I found a fish to feed it to. I got sick of carrying it and dropped it, then about a minute later I saw this fella! Fish people are weird!"

Be a mentor – be a protégé

Many of our members have expressed their enthusiasm for the ASPB Mentorship Program. Intake for the Program also starts Jan. 1, 2016 and ends Feb. 28, 2016. (You can apply for the program during membership renewals.)

Please read carefully through the requirements to join the program. Each year we find a few folks who sign up for the program, get matched with a mentor or protégé, and later drop out of the program. So, if you plan to sign up for the mentorship program, please be sure you are willing to see it through the full one-year commitment!

Learn more about the Mentorship Program on the ASPB website at https://www.aspb.ab.ca/mentoring-program

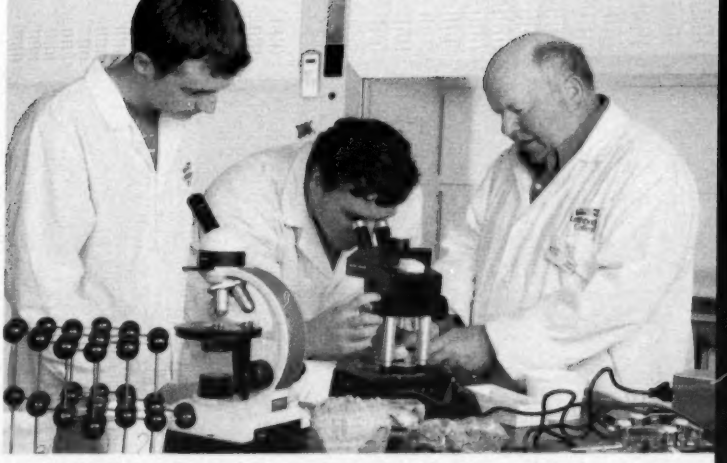
Environmental sciences at Lethbridge College

by Terry Kowalchuk, Ph.D.

Lethbridge College's School of Environmental Sciences is excited to be working with the Alberta Society of Professional Biologists on a number of initiatives. The college has provided biological and ecological graduates from our Renewable Resource Management program, and our Environmental Assessment and Restoration program, for over 40 years.

Graduates from this program have found careers in both the public and private sectors, with companies in the environmental assessment and environmental reclamation fields. With this in mind, we are pleased to see the new designation of Registered Technologist in Biology at the Alberta Society of Professional Biologists. We will be working closely with the ASPB to align our programs and curriculum to the requirements of this designation through our program advisory committee. We have invited the ASPB to join the committee and help develop a better working relationship between our academic programs and the professional society. This relationship will be a positive improvement for all involved, and allow for a smoother transition from student to professional.

We are also happy to include the ASPB in our first ever "Industry Professionals Night". This event is an opportunity for industry professionals to provide an overview of their company, organization, or agency to students in training. We expect the event to be the first connection between students and the ASPB, and an opportunity for the students to direct their training and education to meet the needs of future goals.



A Lethbridge College lab session with Instructor Brett Jensen, Geologist. Photo supplied by Lethbridge College.

Finally, we are proud to announce the launch of our Bachelor of Applied Science Degree in Ecosystem Management. This degree is a variation of the traditional applied degree in that it is four years of on campus coursework delivered in cooperation with Athabasca University. The degree has an applied focus to the discipline of ecosystem management and will include extensive field and applied studies components. The program is based on a theoretical framework that will answer the questions of "why things function that way" along with a practical applied component that will answer the questions of "how things function that way". This unique credential is an example of the changing educational offerings now being delivered in the province.

Terry Kowalchuk is Chair of the School of Environmental Sciences and a Wildlife Biologist Instructor at Lethbridge College.

Saskatchewan scientists seek to develop professional society

According to a recent (December 2015) media release, there is progress for professional biologists and other scientists wishing to organize in Saskatchewan. Incorporated in 2013, and driven by the requirements for Qualified Persons under the Saskatchewan Environmental Code, the Saskatchewan Association of Science Professionals (SASP) was created as an umbrella organization dedicated to elevating the stature and professional standing of science and science professionals in that province.

The SASP's structure allows for several scientific disciplines to be organized as chapters to recognize professional designations in Saskatchewan. "Under SASP, there would be a Biologist Chapter, for example, that would operate similarly to ASPB or CAB-BC," explains Nicole Paille, P. Biol., SASP President and Chair.

"Under SASP, there would be a Biologist Chapter, for example, that would operate similarly to ASPB or CAB-BC..."

Designations will be focused on individuals with scientific degrees with requirements for practice as a professional (e.g. ethics, discipline) common across the entire membership. Each chapter's bylaws will include provisions for "scope of work", "right to title" and "right to practice" with the goal to introduce a Saskatchewan Association of Science Professionals Act which will oversee the member chapters in Saskatchewan.

Ms Paille explains that the SASP is currently in the process of forming a functioning organization, and is at the point where

Continued on page 6

Changes now in force to the Human Toxins and Pathogens Act

The Public Health Agency of Canada (PHAC) is introducing new changes to the Human Toxins and Pathogens Act (HTPA), which came into full force on December 1st, 2015.

The purpose of the HTPA is protect the health and safety of the public against the risk imposed by human pathogens and toxins. The HTPA now replaces the Human Pathogen Importation Regulations (HPIR), which handles the regulation of transportation of infectious material. Pathogens of animals will be covered under the Health of Animal Regulations, and the requirement to license replaces the former requirement to register under HPTA.

The HPTA also specifies that each regulated party will have a biosafety officer to oversee the updated guidelines for accessing, storing, handling, processing, producing, using, transporting, importing, exporting, releasing, or disposing of a potential human pathogens or toxins. Updated guidelines are available in the Canadian Biosafety Standards and the Canadian Biosafety Handbooks; revised .pdf versions will be available by request soon after December 1st.

Applications for a license are to be done electronically, and the portal aims to harmonize the requests regarding human pathogens (HPTA) and animal pathogens (HAR) into a single document. There will be a 90-day period to allow facilities to comply with the new regulations.

Please note the following:

- If, on December 1, 2015 you are performing controlled activities with human pathogens (including possessing, storing, transferring and disposing), licence applications must be submitted PHAC within the 90 day window of December 1, 2015 to February 29, 2016.
- If you had yet to start activities on December 1st, you must wait until the licence application has been processed under the changes to the HPTA. Failure to follow these guidelines may result in enforcement action under the HTPA.

For more information, visit
General PHAC, HPTA: http://www.phac-aspc.gc.ca/lab-bio/regul/hpta-lapht-eng.php
FAQ: http://www.phac-aspc.gc.ca/lab-bio/faq-eng.php
Legal Stuff: http://laws.justice.gc.ca/eng/acts/H-5.67/
Safety Standards:
http://canadianbiosafetystandards.collaboration.gc.ca/cbsg-nldcb/index-eng.php?page=1

This information has been submitted to ASPB Publications for the information of ASPB members by Susan Ross on behalf of the ASPB Microbiology Sub-committee.

Saskatchewan scientists

(continued from page 5)

legal expertise is required to finalize the bylaws for submission to the Government of Saskatchewan. To facilitate these next steps, the association is encouraging professional scientists living or practicing in Saskatchewan to join the association as Provisional Members.

"At this point, our membership drive is a sort of jump start funding campaign that will not only help us build a critical mass of science professionals living or working in Saskatchewan, but will also help to generate funds to carry us forward," says Ms Paille. "This has been more than 10 years in the making and we are excited to be moving forward. With luck, and participation from prospective members, we hope to be granting our first professional designations by 2017."

Ms Paille writes that provisional memberships are open to any science professional, professional in training or science student living or practicing in Saskatchewan. While the provisional membership will not provide professional designation, it will provide access to updates, member news, and participation in SASP development and networking. Interested applicants should contact Nicole Paille at SASPBoard@gmail.com.

Passages

MARSHA VANDENENDEN, P. Biol.
August 16, 1976 - October 31, 2015

The friends and colleagues of Marsha VandenEnden were shocked and deeply saddened to learn of her passing in early November. Ms VandenEnden was recently employed at Aquality and before that served as Wildlife Section Manager at Nickpoint Environmental Services. She was dedicated to, and passionate about, her profession. She received her Technical Diploma in Biological Sciences through the Northern Alberta Institute of Technology in 2004, then attended the University of Alberta where she obtained her Bachelor of Science Degree in Environmental and Conservation Sciences.

At the time of her passing, Ms VandenEnden was enrolled in a Master's Degree program in Conservation Sciences at Royal Roads University in Victoria.

Donations in memory of Marsha VandenEnden can be made to the Calgary Wildlife Rehabilitation Society.

Board Ownership Linkage Survey: Sneak Peek at the Results

The board completed an online ownership linkage survey this winter to get input on important questions related to the strategic direction of the ASPB. The online survey directed the respondents into three separate questionnaires based on initial responses:

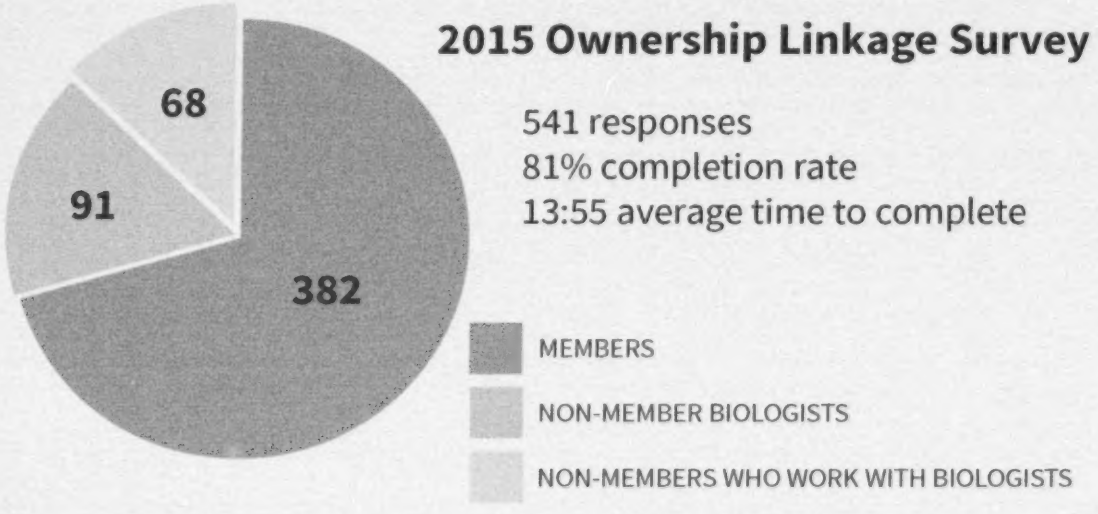
1. ASPB members
2. Non-member biologists
3. Non-members who work with of biologists

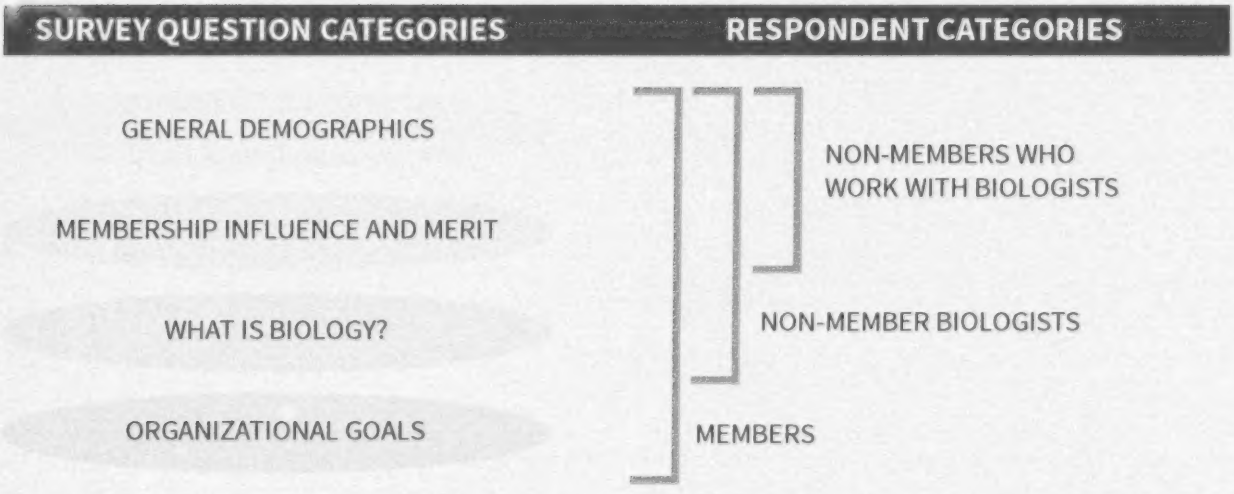
The survey was open from November 12 to December 14, 2015. We received a superb total of 541 responses, out of which 382 were ASPB members, 91 were non-member biologists, and 68 were non-members, who work with biologists.

Each group received slightly different survey questions in addition to general demographics. The members were asked about ASPB's organizational goals, the influence and merit of ASPB membership, and how biology is defined. Non-member biologists were asked about the influence and merit of ASPB membership and how biology is defined. Employers of biologists were asked about the influence and merit of ASPB membership only.

The board will now review and analyze the survey results and use the responses to inform strategic planning. More details on the survey results and the board's strategic vision will be provided in the spring BIOS.

Submitted by Karoliina Munter





Registration Policy Handbook update now includes Registered Technologists

The Registration Policy Handbook has been updated, and the Registration Committee is now able to review membership applications from Registered Technologist in Biology (R.T.Biol.) applicants, as well as Biological Technologist in Training (BTT) applicants. Those approved will be non-regulated until such time that the Professional Biologist Regulation is amended, potentially this coming spring. At that time, the R.T.Biol. will be regulated and will have full title protection.

A Registered Technologist in Biology must have a two year diploma from a post-secondary institution (the diploma must contain at least eight biology/ecology courses, applied science courses, and at least one communications and one statistics course). The applicant must have two years of experience in the previous five years earned after graduation, and should provide the names of three referees who are knowledgeable about the applicant's professional experience as a technologist and their character and reputation. At least one referee should be a P. Biol. If a P. Biol. is not available, a professional from another recognized professional organization will be acceptable. (Preferred referees include the applicant's current employer, previous employer or supervisor. Only two letters of reference will be accepted from a current employer.)

Additions to the handbook include clarifications to the delegation of authority by the Board through the Executive Director to the Registration and Practice Review Committees along with increased responsibility to the Registrar. There are also a number of changes to how things are done: documentation will be application-based instead of a requirement for a résumé; experience requirements have expanded to include proposed changes to regulations that the membership approved in 2014; and the equivalency section has been updated and is being implemented.

The link to the updated version of the Registration Policy Handbook can be found at: https://www.aspb.ab.ca/membership-categories, where you can also find a graphic which clarifies the ASPB system of membership categories.

... climate change; how are we doing with biodiversity conservation?

(continued from page 3)

Great Britain is not North America – or more specifically Canada – with its abundance of wildlands. When asked if Dr Thomas' point of view is seen as relevant in our country, Dr Farr responds that yes, that point of view does have some traction in Canada and Alberta: "In Canada's prairie region, the strategy of deliberately moving species within this highly modified landscape is likely more palatable than in the boreal forest, which is far more wild."

Is conservation biology changing?

In the 2014 Autumn edition of *BIOS*, biologist Stephen J. Mayor was quoted as saying that conservation biology is a value-driven science which - at its core - places value on conserving nature and that "it is a rare sort of science that accepts a bias as its starting point". We asked Dr Farr if we may be entering a period in the Earth's evolutionary process where this bias may have to be re-defined, and he comments that there seems to be no reason to re-define the bias: "There will always be scientists who place value on conserving nature, and many will continue to identify themselves as conservation biologists".

Peter Kareiva and Michelle Marvier address this issue in "What is Conservation Science?" *(Oxford Journals, BioScience, Volume 62, Issue 11 (2012):* "... scientists now widely acknowledge that we live in a world dominated by humans, and therefore, the scientific underpinnings of conservation must include a consideration of the role of humans. Today's conservation science incorporates conservation biology into a broader interdisciplinary field that explicitly recognizes the tight coupling of social and natural systems. Emerging priorities include pursuing conservation within working landscapes, rebuilding public support, working with the corporate sector, and paying better attention to human rights and equity."

Recommended reading: *Understanding and Responding to the Effects of Climate Change on Alberta's Biodiversity*, at http://www.abmi.ca/home/publications

Revisited:
On being a technologist

A year ago, in the 2015 Winter edition of BIOS, we featured an interview with biology technologist Shona Derlukewich, at that time a fisheries biologist with Stantec. We discussed her career path, and she mentioned in that article that "perhaps someday" she might return to university to get a degree. Well, the oil recession happened, and now she is doing exactly that!

"It's amazing how time simply creeps up and next thing you know, I am a full time student again!" says Ms Derlukewich. "My dream of obtaining a Conservation Biology degree was always lurking in the back of my mind but then last summer, layoffs were imminent. Just as fast as the layoff took place, I was enrolled once again in classes!"

Ms Derlukewich is enrolled at the University of Alberta in the Faculty of Agriculture's conservation biology program; she is looking forward to getting her degree and the new opportunities that will open up, especially being able to broaden her commitment to mentoring others. Many ASPB Members will recognize her from the Fish Identification workshops she has presented.

ASPB Membership Renewals

IMPORTANT INFORMATION

Alberta Society of Professional Biologists' membership renewals started January 1, 2016. There are some key pieces of information members need to know before renewing their membership:

Professional Biologists: Professional Biologists must complete their continuing competency program (CCP) information prior to renewing their membership. Please read through materials on the Member Downloads page for details on the CCP.

Temporary Withdrawn: This membership category for Professional Biologists allows them to temporarily withdraw from the Society for a period of up to two years. Temporary Withdrawn Biologists may not use the title of Professional Biologist or P. Biol. during the time they are on Temporary Withdrawn status, and must pay the annual Temporary Withdrawn membership fee ($50). Members on Temporary Withdrawn status are not required to complete their continuing competency during this time. Many members apply for this status while on parental leave or are out of the work force, and may return to P. Biol. status at any time by emailing the ASPB office; they will be required to pay the P. Biol. fees, less what may have already paid. At the end of two years, temporary withdrawn members are automatically returned to P. Biol. status. Application for Temporary Withdrawn status must be made by written request to **pbiol@aspb.ab.ca**

Pay your dues on time: Late fees are added February 28. If Members fail to renew their membership by April 30, they will be removed from the membership of the ASPB and may no longer use their designation. If they wish to become a Member again at a later date, they will have reapply to the ASPB and be assessed under then-current standards; this will include the submission of all required documentation. The ASPB cannot simply reinstate those who fail to pay on time.

Please go to the ASPB website and log in to the members' portal to renew.

Our members publish

BIOS is pleased to include information about professional and technical publications by our members, who may provide us with the author(s) name(s), title, date published and availability (where published, and an internet link if it is available online). The bibliography will reflect material published within the year preceding and including the current BIOS edition. The following publications have been submitted by ASPB Members; the name of the Member submitting the information is **bolded**.

Leech, R., WWI Zeiss / Bausch & Lomb Prism Binoculars with Canadian Markings, *Binocular List*, 612

Leech, R., Leech, T., Zeiss 50X120 WWII Binoculars, 2015, *Binocular List*, 612 http://home.europa.com/~telscope/Zeiss.50x120.WWII.Binoculars.Leech&Leech.10.Oct.2015.pdf

Florez, C. (2015). The Natural Philosophy of Plant Form, Arber, Agnes, 2012. *International Journal of Tropical Biology and Conservation*, 63(3), 885-886.

Leech, R., and A. Popil. 2015. The European bagworm, *Dahlica triquetrella* (Hübner, 1813) (Lepidoptera: Psychidae), in Edmonton, Alberta, and environs, with notes on a parasitoid (Braconidae: Microgastrinae: *Dolichogenidea* sp.). Sept. 2015. Bulletin of the Entomological Society of Canada 47(3): 108-111, 7 figs.

Wilson, R., H. Jones-Otazo, S. Petrovic, M. Roushorne, L. Smith-Munoz, D. Williams and **I. Mitchell**. 2015. Estimation of sediment ingestion rates based on hand-to-mouth contact and incidental surface water ingestion. Human and Ecological Risk Assessment 21(6): 1700-1713. DOI: 10.1080/1080739.2014.974498. (http://www.tandfonline.com/doi/abs/10.1080/10807039.2014.974498#.Ve8iFZfiOB0)

Leech, R., 2015, *Once Apun a Time*, Friesen Press, Victoria, BC.

Demeter, M. A., Lemire, J. A., Yue, G., Ceri, H., & Turner, R. J. (2015a). Culturing oil sands microbes as mixed species communities enhances ex situ model naphthenic acid degradation. *Frontiers in Microbiology*, 6, 1–13. http://doi.org/10.3389/fmicb.2015.00936

Demeter, M. A., Lemire, J., Golby, S., Schwering, M., Ceri, H., & Turner, R. J. (2015b). Cultivation of Environmental Bacterial Communities as Multispecies Biofilms. In *Springer Protocols Handbooks*. Totowa, NJ: Humana Press. http://doi.org/10.1007/8623_2015_82

Lemire, J., **Demeter, M.**, & Turner, R. J. (2015). Protocols for Harvesting a Microbial Community Directly as a Biofilm for the Remediation of Oil Sands Process Water. In *Springer Protocols Handbooks*. Totowa, NJ: Humana Press. http://doi.org/10.1007/8623_2015_55

Hamilton, L. (2015) Rare Plant Distribution Modelling: Exploring Predictor Datasets – A Case Study in Southeast Alberta. *University of Calgary* http://theses.ucalgary.ca/handle/11023/2128

Leech, R. August 2015. Wollensak History – Binoculars & Optics. 32 p., 23 figs. http://home.europa.com/~telscope/Leech.2015.Wollensak.pdf

Leech, R. 2015. Canadian-made Binoculars, Part 1: Research Enterprises Ltd, 1939-1945. March 2015, 10 p., 9 figs. http://home.europa.com/~telscope/leech.2015.Canadian.made.binoculars.1.pdf

Leech, R. 2015. Canadian-made Binoculars, Part 2: BOP & CAL retrofits of RELs in the early 1950s. March 2015, 14 p., 14 figs. http://home.europa.com/~telscope/Leech.2015.Canadian.made.binoculars.2.pdf

Leech, R. 2015. Canadian-made Binoculars, Part 3: ELCAN roof prism, military & Civilian versions, with data on two Fujinon Replacements. March 2015, 12 p., 8 figs. http://home.europa.com/~telscope/Leech/2015.Candian.made.binoculars.3.pdf

Popil, A., and **Leech, R.** 2015. Is the Green Tortoise Beetle finding a home in Alberta. ASPB Electronic Version, BIOS 30(2): 9-10, 4 figs.

Leech, R., and A. Popil. 2015. The European Bagworm (*Dahlica* Huebner, 1813), (Lepidoptera: Psychidae), in Edmonton, Alberta, and Environs, with notes on a parasitoid (Braconidae: Microgastrinae) *Dolichogidea* sp. Bull. Ent. Soc. Canada 47(3): 6 p., 7 figs.

ASPB
ALBERTA SOCIETY
OF PROFESSIONAL BIOLOGISTS

Turning Uncertainty into Opportunity

Science and regulation in changing times

April 5 - 6, 2016

The Carriage House Inn, Calgary

The theme for the 2016 Alberta Society of Professional Biologists' conference, "Turning uncertainty into opportunity: Science and regulation in changing times," will explore how poor economic conditions can give rise to unique pressures and emergent opportunities for professional biologists, and will additionally illuminate the potential repercussions of our economy on the regulatory environment in which we work. Topics will include:

- During challenging economic times, what is our role in balancing the need for sound science while safeguarding the public interest?
- What is the business case for monitoring natural resources (e.g. species at risk) during an economic downturn?
- How do recent regulatory changes affect our practice?

For more information and to register, go to www.aspb.ab.ca/conference

The Alberta Society of Professional Biologists' (ASPB) is a professional regulatory body that is committed to the promotion of excellence in the practice of biology.

PHOTOGRAPHY BY BOB COOK